AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Canceled)

2.(Currently Amended) A method to operate a communication device, comprising:
during a receive period,

receiving a first carrier and deriving a receiver tracking signal that is indicative of a frequency shift between the received first carrier and a reference signal, the receiver tracking signal derived from an accumulated plurality of outputs from a carrier loop tracking circuit; and

shifting a receiver baseband signal by an amount and in a direction indicated by the receiver tracking signal; and
during a next transmission period,

shifting a transmitter baseband signal by an amount indicated by the receiver tracking signal during the receive period, and in a direction opposite to the direction indicated by the receiver tracking signal during the receive period; and

transmitting a second carrier signal that is modulated in accordance with the shifted transmitter baseband signal, wherein shifting comprises time multiplexing a digital phase shifter circuit between a receiver baseband subsystem and a transmitter baseband subsystem.

3.(Previously Presented) A method as in claim 2, wherein the first carrier and the second carrier each conveys a CDMA communication signal.

4.(Previously Presented) A method as in claim 2, wherein the communication device comprises a TDD Customer Premises Equipment (CPE), and where the first carrier is received from a transmitter of an Access Point (AP).

5.(Previously Presented) A method as in claim 2, wherein at the end of the receive period a step is performed of storing the receiver tracking signal for use during the next transmission period.

6.(Previously Presented) A method as in claim 2, wherein the step of shifting the transmitter baseband signal functions to pre-compensate the transmitted second carrier signal so as to reduce carrier acquisition time at a receiver of the transmitted second carrier signal.

7. (Canceled)

8.(Currently Amended) A communication device comprising a receiver baseband subsystem and a transmitter baseband subsystem, and further comprising:

a receiver comprising circuitry that is operable during a receive period for receiving a carrier and for deriving a receiver tracking signal that is indicative of a frequency and phase shift between the received carrier and a reference signal, the receiver tracking signal derived from an accumulated plurality of outputs from a carrier loop tracking circuit, said receiver further comprising shifting circuitry for rotating the frequency and phase of a receiver baseband signal by an amount and in a direction indicated by the receiver tracking signal; and

a transmitter comprising shifting circuitry that is operable during a next transmission period for generating a frequency for a transmitter baseband signal that is shifted by an amount indicated by the receiver tracking signal, and in a direction opposite to the direction indicated by the receiver tracking signal, wherein said shifting circuitry of said transmitter and said receiver comprises a frequency to phase accumulator circuit and a digital phase shifter circuit, and circuitry for time multiplexing said frequency to phase accumulator circuit and said digital phase shifter circuit between said receiver baseband subsystem and said transmitter baseband subsystem.

9.(Previously Presented) A communication device as in claim 8, wherein the carrier conveys a CDMA communication signal.

10.(Previously Presented) A communication device as in claim 8, wherein said communication device is a TDD communication device and comprises Customer Premises Equipment (CPE), and where the carrier is received from a transmitter of an Access Point (AP).

11.(Previously Presented) A communication device as in claim 8, and further comprising

sample and hold means responsive to an end of the receive period for storing the receiver tracking signal for use during the next transmission period.

12.(Currently Amended) A Time Division Duplex (TDD) Code Division Multiple Access (CDMA) communication system comprising a plurality of Customer Premises Equipment (CPE) and an Access Point (AP) that communicate through RF links, wherein a CPE comprises a receiver baseband subsystem and a transmitter baseband subsystem and further comprising:

receiver circuitry operable during a receive period for receiving an RF carrier from the AP and for deriving a receiver tracking signal that is indicative of an error between the received carrier and a reference signal, the receiver tracking signal derived from an accumulated plurality of outputs from a carrier loop tracking circuit, said receiver circuitry further comprising a digital phase shifter for correcting the frequency and phase of a receiver baseband signal by an amount and in a direction indicated by the receiver tracking signal;

multiplexing circuitry for sharing said digital phase shifter between said receiver baseband subsystem and said transmitter baseband subsystem; and

transmitter circuitry operable during a next transmission period for operating said digital phase shifter to correct the frequency of a transmitter baseband signal by an amount indicated by the receiver tracking signal, and in a direction opposite to the direction indicated by the receiver tracking signal, for pre-compensating an RF carrier that is transmitted to said AP so as to reduce carrier acquisition time at a receiver of the AP.

13.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises a frequency to phase accumulator having an input coupled to receive said receiver tracking signal and an output coupled to a control input of said digital phase shifter.

14.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises a frequency to phase accumulator having an input coupled to receive said receiver tracking signal and an output coupled to a control input of said digital phase shifter, wherein said multiplexing circuitry shares both said frequency to phase accumulator and said digital phase shifter between said receiver baseband subsystem and said transmitter baseband subsystem.

15.(Previously Presented) A TDD system as in claim 13, wherein said CPE further comprises circuitry responsive to an end of the receive period for storing the receiver tracking signal for use by said digital phase shifter during the next transmission period.

16.(Previously Presented) A TDD system as in claim 12, wherein said CPE further comprises circuitry responsive to an end of the receive period for storing the receiver tracking signal and for inverting said stored receiver tracking signal for use by said digital phase shifter during the next transmission period.

17. (Canceled)

18.(Currently Amended) A Time Division Duplex (TDD) Code Division Multiple Access (CDMA) communication system comprising a plurality of Customer Premises Equipment (CPE) and an Access Point (AP) that wirelessly communicate with one another, wherein a CPE comprises receiver baseband means and transmitter baseband means and further comprises:

a carrier loop tracking circuit;

a local clock;

frequency to phase accumulator means, having an input coupled to an output of the carrier loop tracking circuit, operable during a receive period of a carrier from the AP for deriving a receiver tracking signal that is indicative of an error between the received carrier and a reference signal, the receiver tracking signal derived from an accumulated plurality of outputs from a carrier loop tracking circuit;

correcting means, having a control input coupled to an output of the frequency to phase accumulator means, for correcting the frequency and phase of a receiver baseband signal by an amount and in a direction indicated by the receiver tracking signal;

~~frequency to phase accumulator means having an input coupled to receive said receiver tracking signal and an output coupled to a control input of said correcting means;~~

sharing means for sharing said correcting means between said receiver baseband means and said transmitter baseband means, wherein said sharing means shares both said frequency to phase accumulator means and said correcting means between said receiver baseband means and said transmitter baseband means; and

means operable during a next transmission period for operating said correcting means

to vary the frequency of a transmitter baseband signal by an amount indicated by the receiver tracking signal, and in a direction opposite to the direction indicated by the receiver tracking signal, for pre-compensating a transmitted carrier that is transmitted to said AP.

19.(Previously Presented) A TDD system as in claim 18, wherein said CPE further comprises means, responsive to an end of the receive period, for storing the receiver tracking signal for use during the next transmission period.

20.(New) The method of claim 2, wherein the receiver tracking signal comprises:

f_0=(CF*SH value)/L;

wherein f_0 is the receiver tracking signal;

CF is a clock frequency of a local clock;

SH value is a value output from the carrier loop tracking circuit; and

L is a length of an accumulator that stores a plurality of SH values, one from each of a plurality of sequential clock periods.

21.(New) The communication device of claim 8, wherein the receiver further comprises a local clock that defines a clock frequency (CF) and clock period, carrier loop tracking circuitry for outputting on each clock period a frequency change of the carrier, a sample and hold circuit for storing the output of the carrier loop tracking circuitry (SH value) on each clock period, and an accumulator of length L for accumulating sequential SH values, said receiver configured to output the tracking signal f_0=(CF*SH value)/L to the shifting circuitry.

22.(New) The TDD system as in claim 12, wherein the receiver circuitry further comprises a local clock that defines a clock frequency (CF) and clock period, carrier loop tracking circuitry for outputting on each clock period a frequency change of the carrier, a sample and hold circuit for storing the output of the carrier loop tracking circuitry (SH value) on each clock period, and an accumulator of length L for accumulating sequential SH values, said receiver configured to output the tracking signal f_0=(CF*SH value)/L to the digital phase shifter.

23.(New) The TDD system as in claim 18, wherein the receiver tracking signal comprises:

f_0=(CF*SH value)/L;

wherein f_0 is the receiver tracking signal;

CF is a clock frequency of the local clock;

SH value is a value output from the carrier loop tracking circuit; and

L is a length of the frequency to phase accumulator means that stores a plurality of SH values, one from each of a plurality of sequential clock periods.